

AMENDMENTS TO THE CLAIMS:

1 1. (Currently Amended) A presence detector, comprising:
2 an optical emitter for emitting optical radiation;
3 an optical detector for detecting a presence of an object based on receiving said optical
4 radiation; and
5 a microcontroller for controlling said optical emitter and processing said optical detector
6 output, such that a range adjustment and range hysteresis based on said object are provided by
7 software in said microcontroller,
8 wherein said optical detector determines the presence of an object when a first fraction of
9 the emitted optical radiation is sensed, and
10 wherein said optical detector determines an object is no longer present when a second
11 fraction of emitted optical radiation less than the first fraction is sensed.

2. (Original) The presence detector of claim 1, wherein said optical emitter, said optical detector, and said microcontroller are integrated into a cover of a display terminal, with optical isolation between said optical emitter and optical detector being provided by said cover.

3. (Original) The presence detector of claim 1, wherein first and second optical windows are provided for said optical emitter and said optical detector, respectively, to eliminate optical coupling between said emitter and said optical detector.

4. (Original) The presence detector of claim 2, wherein first and second optical windows are provided for said optical emitter and said optical detector, respectively, to eliminate optical coupling between said emitter and said optical detector.

5. (Original) The presence detector of claim 2, wherein said optical radiation includes infrared radiation.

6. (Original) The presence detector of claim 3, wherein said optical radiation includes infrared

radiation.

7. (Original) The presence detector of claim 1, wherein said optical detector comprises an optical detection module.

1 8. (Currently Amended) A presence detector, comprising:

2 an optical emitter for emitting optical radiation;

3 an optical detector ~~module~~ for detecting presence of an object based on receiving said
4 optical radiation; and

5 a microcontroller for controlling said optical emitter and processing said optical detector
6 output, such that a range adjustment and range hysteresis based on said object are provided by
7 software in said microcontroller,

8 wherein said optical emitter, said optical detector, and said microcontroller are integrated
9 into a cover of a display terminal, ~~optical isolation between said emitter and detector being~~
10 ~~provided by said cover~~

11 wherein said optical detector determines the presence of an object when a first fraction of
12 the emitted optical radiation is sensed, and

13 wherein said optical detector determines an object is no longer present when a second
14 fraction of emitted optical radiation less than the first fraction is sensed.

9. (Currently Amended) The presence detector of claim 8, wherein ~~said optical emitter, said~~
~~optical detector, and said microcontroller are integrated into a cover of a display terminal,~~
with said cover provides an optical isolation between said optical emitter and said optical
detector ~~being provided by said cover.~~

10. (Original) The presence detector of claim 8, wherein first and second optical windows
are provided for said optical emitter and said optical detector, respectively, to eliminate
optical coupling between said emitter and said optical detector.

11. (Original) The presence detector of claim 9, wherein first and second optical windows are
provided for said optical emitter and said optical detector, respectively, to eliminate optical

coupling between said emitter and said optical detector.

12. (Original) The presence detector of claim 9, wherein said optical radiation includes infrared radiation.

13. (Currently Amended) The presence detector of claim 10, wherein said ~~optica~~ optical radiation includes infrared radiation.

14. (Original) The presence detector of claim 8, wherein said optical detector comprises an optical detection module.

15. (Currently Amended) A display terminal, comprising:

an optical emitter for emitting optical radiation;

an optical detector for detecting presence of an object based on receiving said optical radiation; and

a microcontroller for controlling said optical emitter and processing said optical detector output, such that a range adjustment and range hysteresis based on said object are provided by software in said microcontroller,

wherein said optical detector determines the presence of an object when a first fraction of the emitted optical radiation is sensed, and

wherein said optical detector determines an object is no longer present when a second fraction of emitted optical radiation less than the first fraction is sensed .

16. (Original) The display terminal of claim 15, further comprising:

a cover for integrally housing said optical emitter, said optical detector, and said microcontroller.

17. (Currently Amended) The display terminal of claim 16, wherein said ~~covers~~ cover optically isolates said optical emitter and said optical detector.

18. (Original) The display terminal of claim 15, wherein first and second optical windows are

provided for said optical emitter and said optical detector, respectively, to eliminate optical coupling between said emitter and said optical detector.

19. (Original) The display terminal of claim 15, wherein said optical radiation includes infrared radiation.

20. (Original) The display terminal of claim 16, wherein said optical radiation includes infrared radiation.

21. (Currently Amended) A chatter-free, infrared emitter-detector, comprising:

an infrared emitter operable to emit a plurality of digital pulses of infrared radiation directed at an operator;

an infrared detector operable to sense said infrared radiation after reflection from said operator; and

a controller operable to cause said infrared detector to emit a first signal upon sensing of a first fraction of said plurality of digital ~~signals~~ pulses,

said controller being operable to emit a second signal upon sensing of a second fraction of said plurality of digital ~~signals~~ pulses,

said first fraction being larger than said second fraction.

22. (Original) The emitter-detector according to claim 21, wherein said operator comprises a point-of-sale (POS) operator.

23. (Original) The emitter-detector according to claim 22, wherein said first signal comprises a signal representing detection of the presence of said operator.

24. (Original) The emitter-detector according to claim 21, wherein said first signal comprises a signal representing a detection of the presence of said operator.

25. (Original) The emitter-detector according to claim 21, wherein said second signal comprises a signal representing detection of the absence of said operator.

1 26. (Currently Amended) An infrared emitter-detector unit comprising:

2 a panel comprising a surface, two apertures therein extending through said surface, and
3 two cavities, each cavity extending to one of said two apertures, said two cavities being
4 isolated from radiation communication from each other;

5 an infrared emitter disposed within a first one of said two cavities and operable to emit
6 infrared radiation through a first one of said two apertures;

7 an infrared detector disposed within a second one of said two cavities and operable to
8 receive infrared radiation through a second one of said two apertures; and

9 a pair of infrared-transparent covers each being disposed over one of said two apertures,
10 said covers being separated to prevent transmission of infrared radiation therebetween,

11 wherein said infrared detector determines the presence of an object when a first fraction
12 of the emitted infrared radiation is sensed, and

13 wherein said optical detector determines an object is no longer present when a second
14 fraction of emitted infrared radiation less than the first fraction is sensed.

27. (Original) The emitter-detector unit according to claim 26, wherein said unit comprises a sealed unit.

1 28. (Currently Amended) A method of sensing a presence of an object, comprising:

2 emitting a plurality of digital pulses of infrared radiation directed at an operator;

3 sensing said infrared radiation after reflection from said operator;

4 causing a first signal to be emitted upon sensing of a first fraction of said plurality of
5 digital ~~signals~~ pulses; and

6 emitting a second signal upon sensing of a second fraction of said plurality of digital
7 ~~signals~~ pulses,

8 said first fraction being larger than said second fraction.

29. (New) The presence detector according to claim 1, wherein said first fraction of detected radiation of said emitted radiation is approximately 0.75 and said second fraction is approximately 0.25.

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30. (New) The presence detector according to claim 1, wherein said optical emitter operates at constant power, and

wherein said optical detector detects a presence of an object based on a measurement of amplitude of said optical radiation.